CLAIMS

Sub B1

1. A surgical clip having a sliding state and a crimped state, and being adapted for use in a surgical procedure initially to slide along suture ends to an operative position and ultimately to crimp the suture ends at the operative position, comprising:

a substrate bendable between the sliding state and the crimped state, the substrate being formed from a material having a first coefficient of friction with the suture ends;

at least one coating carried by the substrate to form a layer of material on the substrate; and

the material of the layer forming a barrier between the suture ends and the substrate, the barrier being adapted to inhibit contact between the suture ends and the substrate when the clip is operatively dropped on the suture ends; .

2. The surgical clip recited in Claim 1 wherein the material of the layer has properties for engaging the suture ends with a second coefficient of friction less than the first coefficient of friction to facilitate sliding of the clip in the suture ends.

3. The surgical clip recited in Claim 2 wherein the coating is a first coating forming a first layer of the first material, and the clip further comprises:

a second coating carried by the substrate and forming a second layer of a second material; and

the second material having properties including a third coefficient of friction with the suture ends, the third coefficient of friction being greater than the first coefficient of friction to facilitate traction between the suture ends and the clip in the crimped state

4. The surgical clip recited in Claim 3 wherein the second layer is disposed between the first layer and the substrate.

5. The surgical clip recited in Claim 1 wherein the material of the layer has properties for engaging the suture ends with a second coefficient of friction greater than the first coefficient of friction to facilitate traction between the suture ends and the clip in the crimped state.

6. The surgical clip recited in Claim 5 wherein the coating is a first coating forming a first layer of a first material, and the clip further comprises:

a second coating carried by the substrate and forming a second layer of the second material; and

the second material having properties including a third coefficient of friction with the suture ends, the third coefficient of friction being less than the first coefficient of friction to facilitate movement of the clip in the sliding state along the suture ends.

7. The surgical clip recited in Claim 6 wherein the first layer is disposed between the second layer and the substrate.

8. The surgical clip recited in Claim 4 wherein the second material is more compliant than the material of the suture ends.

9. The surgical clip recited in Claim 8 wherein the suture ends are formed of a particular material and the second material of the second layer includes the particular material.

10. The surgical clip recited in Claim 2 wherein the material of the layer forms a lubricious coating.

11. The surgical clip recited in Claim 10 wherein the lubricious coating includes at least one of a hydrophilic material and a hydrophobic material

12. The surgical clip recited in Claim 5 wherein the material of the layer includes plastic.

13. The surgical clip recited in Claim 12 wherein the plastic of the coating includes at least one of polypropylene and polyethylene.

14. A surgical combination, including:

a pair of suture ends formed of a first material;

a clip having a sliding state facilitating a sliding relationship with the suture ends to an operative position, and a crimped state facilitating a fixed relationship with the suture ends at the operative position;

suture ends, the coating forming a barrier to inhibit contact between the suture ends and the substrate.

15. The surgical combination recited in Claim 14 wherein the second coefficient of friction associated with coating is less than the first coefficient of friction associated with the substrate in order to facilitate the sliding relationship between the suture ends and the clip in the sliding state.

16. The surgical combination recited in Claim 14 wherein the second coefficient of friction associated with coating is greater than the first coefficient of friction associated with the substrate in order to facilitate the fixed relationship between the suture ends and the clip in the crimped state.

17. The surgical combination recited in Claim 15 wherein the layer of the coating is a first layer and the coating further comprises:

a second layer of a fourth material having a third coefficient of friction with the first material of the suture ends; and

the third coefficient of friction associated with the second layer being greater than both the first coefficient of friction associated with the substrate and the second coefficient of friction associated with the first layer of the coating.

18. The surgical combination recited in Claim 17 wherein the second layer is disposed between the first layer and the substrate.

19. The surgical combination recited in Claim 16 wherein the layer of the coating is a first layer and the coating further comprises:

a second layer of a fourth material having a third coefficient of friction with the first material of the suture ends; an

the third coefficient of friction associated with the second layer being less than the first coefficient of friction associated with the substrate and the second coefficient of friction associated with the first layer and the substrate.

20. The surgical combination recited in Claim 19 wherein the first layer is disposed between the second layer and the substrate.

21 The surgical combination recited in Claim 14 wherein the first material of the suture ends is resorbable.

22. A method for applying a surgical clip to a pair of suture ends formed of a first material, the method comprising the steps of:

providing the surgical clip with a substrate having a first coefficient of friction with the first material of the suture ends and a coating on the substrate, the coating including a first layer of a third material carried by the substrate, the first layer having a second coefficient of friction with the first material greater than the first coefficient of friction, and a second layer carried by the first layer, the second layer having a third coefficient of friction with the first material of the suture ends less than the second coefficient of friction associated with the first layer;

sliding the clip along the suture ends to an operative position;

during the sliding step, contacting the suture ends with the second layer of the coating to facilitate the sliding step with the lesser third coefficient of friction;

moving the substrate relative to the suture ends to maintain the suture ends in a fixed relationship at the operative site; and

during the moving step, contacting the suture ends with the first layer of the coating to facilitate the fixed relationship with the greater second coefficient of friction

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23. The method recited in Claim 22 wherein the moving step includes the step of bending the substrate relative to the suture ends

24. The method recited in Claim 23 wherein the bending step includes the step of crimping the surgical clip around the suture ends at the operative site.

25. The method recited in Claim 22 wherein, prior to the end of the bending step, the method further comprises the step of:

penetrating the second layer of the coating with the suture ends to bring the suture ends in to contact with the first layer of the coating.